

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A hybrid driving unit, comprising:
 - an input shaft for inputting motive power from an internal combustion engine;
 - an output shaft disposed on an axis in line with said input shaft and ~~interlocking~~ engaged with driving wheels;
 - a first electric motor disposed on said axis and ~~having~~ comprising a stator and a rotor;
 - a ~~power-splitting~~ power-splitting planetary gear disposed on said axis and ~~having~~ comprising a first rotary element coupled with said input shaft, a second rotary element coupled with said rotor of said first electric motor and a third rotary element coupled with said output shaft;
 - a second electric motor disposed on said axis and ~~having~~ comprising a stator and a rotor;
 - and
 - a transmission disposed on said axis, ~~which-and-shifting shifts~~ and ~~transmitting~~ transmits revolution of said rotor of said second electric motor to said output shaft; ~~and~~
 - ~~said hybrid driving unit being characterized in that:~~
 - wherein said first electric motor, said ~~power-splitting~~ power-splitting planetary gear, said second electric motor and said transmission are ~~stored~~ provided in a casing member while being disposed in line on said axis;

wherein said stators of said first and second electric motors are fixed to said casing member; and

wherein said first electric motor, said ~~power-splitting~~power-splitting planetary gear, said second electric motor and said transmission are disposed ~~along-on~~ said axis such that said second electric motor is positioned on ~~the-a~~ side of a vehicle closer to said internal combustion engine than said first electric motor.

2. (currently amended): The hybrid driving unit as set forth in ~~Claim-claim~~ claim 1, ~~characterized in that~~wherein said second electric motor is disposed in ~~the-a~~ foremost ~~part~~position in said vehicle among said first electric motor, said ~~power-splitting~~power-splitting planetary gear, said second electric motor and said transmission ~~disposed on said axis of said casing member~~.

3. (currently amended): The hybrid driving unit as set forth in ~~Claim-claim~~ claim 2, ~~characterized in that~~wherein said transmission is provided adjacent to said second electric motor.

4. (currently amended): The hybrid driving unit as set forth in ~~Claim-claim~~ claim 2, ~~characterized in that~~wherein supporting members extending from said casing member support ~~the-both~~ sides of said rotor of said second electric motor through an intermediary of bearing members; and

~~wherein said one of said supporting member~~members, which is between said second electric motor and said transmission, ~~among said supporting members,~~ forms a hydraulic chamber of a hydraulic actuator of said transmission.

5. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim 4, ~~characterized in that~~wherein at least a part of said hydraulic chamber is provided on ~~the~~an inner diametric side of said stator ~~(coil end)~~ of said second electric motor.

6. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim 1, ~~characterized in that~~wherein said second electric motor, said transmission, said ~~power splitting~~power-splitting planetary gear and said first electric motor are disposed in order from ~~the~~ a side of said vehicle that is closer~~closest~~ to said internal combustion engine.

7. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim 6, ~~characterized in that~~wherein said input shaft passes through ~~the~~an inner peripheral side of said second electric motor and said transmission;

wherein said input shaft ~~and~~ is coupled with ~~said a~~ ring gear;

wherein ~~and~~ said output shaft passes through ~~the~~an inner peripheral side of said ~~power splitting~~power-splitting planetary gear and said first electric motor; and

wherein ~~and~~ said output shaft is coupled with an output element of said transmission through ~~the~~an outer peripheral side of said ~~power splitting~~power-splitting planetary gear.

8. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim 7, ~~characterized in that~~wherein said ~~power-splitting~~power-splitting planetary gear comprises a double pinion planetary gear train;

wherein said input shaft passes between said transmission and said ~~power-splitting~~power-splitting planetary gear;

wherein said input shaft~~and~~ is coupled with a ring gear of said double pinion planetary gear train;

wherein said output shaft is coupled with a carrier of said double pinion planetary gear train on ~~the a~~ side of said transmission through the inner peripheral side of said ~~power~~power-splitting planetary gear;

wherein said rotor of said first electric motor is coupled with a sun gear of said double pinion planetary gear train; and

wherein said output element of said transmission is coupled with said carrier of said double pinion planetary gear train on ~~the a~~ side of said first electric motor through ~~the an~~ outer peripheral side of said ~~power-splitting~~power-splitting planetary gear.

9. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim 7, ~~characterized in that~~wherein supporting members extending from said casing member support ~~the both sides~~sides of said rotor of said first electric motor through an intermediary of bearing members; and

wherein said output shaft is supported by ~~the~~ an inner peripheral surface of said rotor of said first electric motor through an intermediary of bearing members provided at ~~the~~ an outer peripheral surface of said output shaft.

10. (currently amended): The hybrid driving unit as set forth in ~~Claim~~ claim 9, ~~characterized in that~~ wherein said supporting members extending from said casing member support ~~the~~ both sides of said rotor of said second electric motor through ~~the~~ an intermediary of said bearing members and said input shaft is supported by ~~the~~ an inner peripheral surface of said rotor of said second electric motor through an intermediary of ~~a~~ bearing ~~member~~ members provided at ~~the~~ an outer peripheral surface of said input shaft.

11. (currently amended): The hybrid driving unit as set forth in ~~Claim~~ claim 1, ~~characterized in that~~ wherein said second electric motor, said transmission, said first electric motor and said ~~power-splitting~~ power-splitting planetary gear are disposed in order from ~~the~~ a side ~~of the vehicle~~ closer closest to said internal combustion engine.

12. (currently amended): The hybrid driving unit as set forth in ~~Claim~~ claim 11, ~~characterized in that~~ wherein said input shaft passes through ~~the~~ an inner peripheral side of said second electric motor, said transmission, said first electric motor and said ~~power-splitting~~ power-splitting planetary gear;

wherein said input shaft ~~and~~ is coupled with said first rotary element;

wherein said output shaft passes through ~~the~~an outer peripheral side of said ~~power~~
~~splitting~~power-splitting planetary gear;

wherein~~and the~~an output element of said transmission passes through ~~the~~an inner
peripheral side of said first electric motor and said ~~power~~~~splitting~~power-splitting planetary gear;
and

wherein said output element is coupled with said output shaft.

13. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim 12,
~~characterized in that~~wherein said ~~power~~~~splitting~~power-splitting planetary gear comprises a
double pinion planetary gear train;

wherein said input shaft is coupled with ~~said~~a ring gear of said double pinion planetary
gear train through ~~the~~a back side of said ~~power~~~~splitting~~power-splitting planetary gear;

wherein said output shaft is coupled with said carrier of said double pinion planetary gear
train on ~~the~~a side of said first electric motor;

wherein said rotor of said first electric motor is coupled with said sun gear of said double
pinion planetary gear train; and

wherein said output element of said transmission is coupled with the rear side of said
carrier ~~of~~ said double pinion planetary gear train through the inner peripheral side of said ~~power~~
~~splitting~~power-splitting planetary gear.

14. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim 11, ~~characterized in that~~wherein said supporting members extending from said casing member support ~~the~~ both sides of said rotor of said first electric motor through an intermediary of bearing members; and

wherein ~~said~~ an output element of said transmission is supported by ~~the~~ an inner peripheral surface of said rotor of said first electric motor through an intermediary of -bearing members provided on ~~the~~ an outer peripheral surface thereof.

15. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim 11, ~~characterized in that~~wherein said supporting members extending from said casing member support ~~the~~ both sides of said rotor of said second electric motor through ~~the~~ an intermediary of ~~the~~ bearing members; and

wherein said input shaft is supported by ~~the~~ an inner peripheral surface of ~~the~~ said rotor of said second electric motor and by ~~the~~ an inner peripheral surface of ~~the~~ an output element of said transmission through an intermediary of bearing members provided on ~~the~~ an outer peripheral surface of said input shaft.

16. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim ~~11~~15, ~~characterized in that~~wherein one of said ~~the~~ supporting ~~member~~members between said second electric motor and said transmission, ~~among said supporting members,~~ forms ~~said~~ a hydraulic chamber of ~~said~~ a hydraulic actuator of said transmission.

17. (currently amended): The hybrid driving unit as set forth in ~~anyone of~~ ~~Claims~~claim 1 through 16, ~~characterized in that~~wherein said transmission ~~has comprises~~ a planetary gear unit.

18. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim 17, ~~characterized in that~~wherein said transmission ~~has comprises~~ at least four shifting elements;
wherein said a first shifting element is coupled with said rotor of said second electric motor;
wherein a said second shifting element is coupled with said output shaft;_i and
wherein said transmission ~~has comprises~~ braking elements which are capable of fixing ~~said~~ a third shifting element and a fourth shifting elements to said casing member, ~~respectively~~.

19. (currently amended): The hybrid driving unit as set forth in ~~Claim~~claim 17, ~~characterized in that~~wherein said planetary gear unit of said transmission comprises a Ravigneaux type planetary gear; and
wherein said a carrier of ~~the~~said Ravigneaux type planetary gear is coupled with said output shaft.

20. (currently amended): A vehicle comprising:
an internal combustion engine;_i

a hybrid driving meansunit; and
rear wheels as driving wheels to which a driving force is transmitted from said hybrid
driving meansunit; is characterized in that
wherein said hybrid driving unit comprises:
an input shaft for inputting motive power from said internal combustion engine;
an output shaft disposed on an axis in line with said input shaft and engaged with driving
wheels;
a first electric motor disposed on said axis and having comprising a stator and a rotor;
a power-splitting planetary gear disposed on said axis and having comprising a first rotary
element coupled with said input shaft, a second rotary element coupled with said rotor of said
first electric motor and a third rotary element coupled with said output shaft;
a second electric motor disposed on said axis and having comprising a stator and a rotor;
and
a transmission disposed on said axis which shifts and transmits a revolution of said rotor
of said second electric motor to said output shaft;
wherein said first electric motor, said power-splitting planetary gear, said second electric
motor and said transmission are provided in a casing member while being disposed in line on
said axis;
wherein said stators of said first and second electric motors are fixed to said casing
member; and

wherein said first electric motor, said power-splitting planetary gear, said second electric motor and said transmission are disposed on said axis such that said second electric motor is positioned on a side of a vehicle closer to said internal combustion engine than said first electric motor.

~~said hybrid driving means is said hybrid driving unit described in anyone of Claims 1 through 19 in which said input shaft is coupled with an output shaft of said internal combustion engine, said propeller shaft is coupled with said output shaft, and said output shaft of said internal combustion engine, said input shaft, said output shaft and said propeller shaft are disposed approximately on one and same axial line.~~

21. (new): The vehicle according to claim 20, wherein said input shaft is coupled with a crankshaft of said internal combustion engine;

wherein a propeller shaft is coupled with said output shaft; and

wherein said crankshaft, said input shaft, said output shaft and said propeller shaft are disposed approximately on the same axial line.